

Commonwealth of Virginia

Electronic Government Implementation Division

Seat Management Section

Model for Conducting TCO Evaluations in Medium/Large Agencies

**Using the Gartner TCO Manager Software
and Model for Distributed Computing Environments
Version 4.5.3**

Revised December 6, 2001

Change Summary

December 6, 2001 – Corrected the TCO Evaluation Schedule to correctly identify the Personnel Work Allocation worksheet. (removed the “4L” designation)

Model for Conducting TCO Evaluations In Medium/Large Agencies

Using the Gartner TCO Manager Software
and Model for Distributed Computing Environments

MODEL SCOPE

This model, the assumptions contained in the model, and the corresponding worksheets are structured to meet the TCO processes and data collection requirements for medium to large sized agencies and institutions of higher education (medium is defined as more than 115 authorized positions).

DATA COLLECTION ASSUMPTIONS

The following assumptions, procedures, and clarifications should be considered normal operating procedures when conducting TCO evaluations for medium or large agencies, and institutions of higher education using the Gartner TCO Manager software for Distributed Computing Environments (version 4.5.3).

COMPANY PROFILE

- **Revenue**

Use the total (all sources of funds) budget amount from the Appropriation Act for the fiscal year that covers the largest part of the evaluation period. When entering this information in the Company Profile round the amount in the “revenue field” to the next highest million.

- **Evaluation Report Period**

The evaluation study period should encompass a one-year period consisting of the most recent completed 12 months.

- **Average Number of Hours Worked Per Year Per Employee**

The Gartner software default for this information is 1,880 hours per year. State agencies and institutions of higher education should use 1,800 hours per year. The “1,800” was arrived at as follows:

- 52 wks per year times 5 workdays per week = 260 possible workdays per year
- Assumptions for days not normally worked
 - o Average employee gets 12 days vacation year
 - o Average employee gets 5 personal days per year
 - o Average employee takes 5 sick days per year
 - o Average employee gets 13 paid holidays

Average days off per year = 35

- Work hours per year: (260 days – 35 days) times 8 hours per day = 1,800

Variations from the 1,800 hours per year and detailed reasons for the variation should be documented as part of the TCO Evaluation Report.

- **End user burden rate**

The average end user burden rate (benefits, etc.) for Commonwealth full time employees is 28%. Variations from this rate and detailed reasons for the variation should be documented as part of the TCO Evaluation Report. Primary reasons for variation from this norm include employee health care options selected and increased retirement benefits associated with law enforcement staff.

- **IS staff burden rate**

The average end user burden rate (benefits, etc.) for Commonwealth full time IS employees is 28%. Variations from this rate and detailed reasons for the variation should be documented as part of the TCO Evaluation Report. Primary reasons for variation from this norm include employee health care options selected and IS employees that travel extensively as part of their job (travel costs are added to the normal burden rate for IS staff in the Gartner model).

- **Location**

Northern Virginia business location should be “Northeast USA”, all other areas of Virginia should use a business location of “Southeast USA”

- **Futz Factor**

Gartner is removing this cost category from future releases of the software, and as such, the “futz factor” is considered out of scope.

CURRENT ASSETS

- **Hardware and Software Costs**

Asset counts (servers, client computers, network devices, peripherals) for the evaluation period will be as of the last day of the evaluation period.

CURRENT EXPENSES

- **Hardware and Software Costs**

Hardware and software costs are normally expensed in the year they are purchased. However, for the purposes of establishing TCO metrics that remove procurement peaks and valleys, hardware and software costs are distributed over their Gartner recommended useful life. The following rules are used to distribute costs for hardware and software contained in the agency's current inventory.

- Desktop computers and software – purchase costs are expensed over three (3) years.
- Portable computers and software – purchase costs are expensed over two (2) years.
- Servers and software – purchase costs are expensed over five (5) years.
- Peripherals - purchase costs are expensed over three (3) years.
- Network Devices - purchase costs are expensed over three (3) years.
- Hardware and software that are more than Gartner's recommended useful life of the asset at the beginning of the evaluation period are counted as assets with a cost of \$0.00.

Items that are acquired or that reach the end of their Gartner recommended useful life during the reporting period for an evaluation should be prorated accordingly.

Lease costs for a reporting period are expensed, not prorated.

Seat management services costs should be broken into appropriate hardware and services components and expensed.

OPERATIONS EXPENSES

- **Allocation of Staff in the IS Cost Categories**

Most medium or large agencies, and institutions of higher education have dedicated in-house staff. Unless the organization has a large IT staff with many specialists and maintains detailed work or timesheet information by activity performed, they should use the Gartner defaults to spread staff cost within a sub-cost category.

Example - Technical Services Client Computers and Peripherals

Include the costs of Operations staff performing any of the following Technical Services activities for client computers and peripherals: tier II problem resolution, tier III problem resolution, traffic management and planning, performance tuning, user administration (adds, moves, changes to users), operating system support, maintenance labor, software deployment, application management, hardware configuration/re-configuration, hardware deployment, disk and file management, storage capacity planning, backup archiving and recovery, and repository management.

Perform the following steps:

- determine the staff and how much of their time is allocated to support each of the operations categories within the defined scope of the TCO evaluation project. Include IS staff, contractors, or user staff.

Hint – When performing a partial TCO for your organization, identify all staff used to support the distributed computing environment within the organization, then pro-rate their effort and cost within the scope of the TCO evaluation project.

- Collect the corresponding annual salary information or total amount paid to contractors for the evaluation period.

- **USE PERSONNEL WORK ALLOCATION WORKSHEET**

- **Operations and Service Desk Metrics**

Collect the requested information on “USER SUPPORT ACTIVITIES, SERVICE DESK METRICS, COMMON SERVICE DESK CALLS, and DISPATCHED SUPPORT CALLS” shown in question 39 of the Tcosurv.doc. Post the results in the Tcosurv.doc.

Note – the TCO evaluation report should reflect any of the requested information that is not available or not maintained within the organization.

ADMINISTRATION EXPENSES

In the Current Expenses - Administration section, information about an organization's finance and administration, IS training, and end user training is collected and compiled. The information is used to calculate the Administration component of the Actual TCO. The Gartner model was developed for large organizations and assumes the cost information for this major cost category is either outsourced or included as overhead in the IS organization.

- **USE PERSONNEL WORK ALLOCATION WORKSHEET**

- **Finance and Administration, IS Training, End User Training**

Determine the cost of staff or the outsourced fees that were incurred to accomplish each of the Finance and Administration tasks (IS administrative assistance, asset management, budgeting and chargeback, auditing, purchasing, procurement and contract management, vendor management, and supervisory management for all the listed tasks), IS Training, and End User Training functions.

END USER CALCULATIONS

- **End User Count (USE WORKSHEET 3 – END USER AVERAGE SALARY CALCULATIONS)**

The count of the number of end users for the evaluation period will be as of the last day of the evaluation period. All contractors and hourly employees must be converted to full-time-equivalent (FTE) employees. The number of end users is equal to the number of FTEs calculated using the worksheet.

- **End User Average Salary Calculations (USE WORKSHEET 3 – END USER AVERAGE SALARY CALCULATIONS)**

An end user average salary calculations worksheet has been developed to ensure that an accurate and consistent unburdened end user average salary is calculated. The Gartner TCO Manager software adds the end user burden rate to this number when it calculates end user operations and downtime costs. For Virginia state government purposes the 28% burden rate is only applicable to classified employees, therefore, special calculations are required to back this amount out for hourly employees and/or consultants. In addition, 7.65 % must be added to hourly employee salaries to reflect the Commonwealth's share for social security.

That portion (all or part) of salaries for staff dedicated to maintaining and supporting an agency's distributed computing environment are included in Information Systems cost categories. Any portion of that staff not included in the IS cost categories should be included in the end user average salary calculations.

- **End User Surveys**

IS Staff shall not participate in the end user survey process. As appropriate, end users that perform some IS staff related functions in the Operations and Administration cost categories as part of their job should participate in the end user survey process.

PROCEDURES FOR CONDUCTING TCO EVALUATIONS

The following steps should be following when conducting TCO evaluations:

ESTABLISH TCO EVALUTION PROJECT

1. Contact agency head or key staff member to establish initial meeting date. TCO evaluation efforts should not be started or conducted without the full support of the agency head. **TCO's are not about IT, they are about the business of the agency and how IT supports that business.**
2. Develop an aggressive schedule for conducting the TCO evaluation that can be completed as scheduled. Guidance – 3-5 weeks to complete all data collection, 1 week to review and analyze collected data, 1 week to develop draft TCO evaluation report and presentation materials, 1 week for agency review of draft report, 2 days to finalize and deliver final report.
3. Prepare schedule (**USE TCO EVALUATION SCHEDULE**) and worksheets (hard copy and electronic format) for distribution at the initial meeting

INITIAL MEETING

1. Meet with the agency head and key business and/or IS staff
2. Establish the purpose of the TCO, its use and distribution
3. Develop and finalize the scope of the TCO evaluation
4. Provide an explanation of the expected results (**USE SMS REPORT TEMPLATE** or previous actual evaluation report as examples)
5. Gain commitment of the agency head for the TCO evaluation, establish the key players for data collection, and finalize the TCO evaluation schedule. (**USE TCO EVALUATION SCHEDULE**)
6. Engage agency staff to gain an understanding of the agency mission and any particular circumstances that can/will/should affect the scope of the TCO evaluation.
7. Explain and review the data collection worksheets with the appropriate agency staff. This includes:
 - Personal Work Allocation Worksheet (Gartner)
 - Worksheet 3 – End User Average Salary Calculations
 - Worksheet 4 – Inventory

- Worksheet 4A –TCO Inventory Miscellaneous Expenses
 - Worksheet 5 – Best Practices
 - Tcosurv.doc document (Gartner)
8. Explain the meaning of end users and IS staff. Collect an automated list of all agency staff including name, email address and telephone number.

DATA COLLECTION AND VERIFICATION

1. Adjust initial proposed schedule as required
2. Set up Internet based survey file and survey instrument (at eGOV) to receive and process agency end user surveys.
3. Prepare memorandum for the agency head for distribution to appropriate agency staff for conducting the end user survey.
4. Set up additional meetings with appropriate agency staff as needed, including meetings for:
 - the collection of Best Practices information,
 - consensus building meeting to define the company profile information
 - consensus building meeting to complete the complexity information.
5. Review all worksheets for reasonableness, completeness, and accuracy
6. Calculate and verify all needed totals on the Personal Work Allocation worksheet and worksheets 3, 4 and 4A.
7. Develop totals from worksheets 3, 4, and 4A and transfer those totals and the information on worksheet 5 to the Tcosurv.doc document.
8. Enter information from the Personal Work Allocation worksheet and the Tcosurv.doc document into the TCO Manager software
9. When end user surveys are complete, import results into the TCO Manager software
10. Review the TCO Manager output data, graphs and reports for reasonableness, completeness, and accuracy.
11. As appropriate meet with the responsible agency staff to verify the reasonableness, completeness, and accuracy of the data collected. Adjust data, collect additional information, and/or get all necessary clarifications.

ANALYSIS OF DATA AND DEVELOPING THE DRAFT REPORT

1. Review results of the end user survey to identify trends or potential areas that need to be addressed
2. Use audit report to identify opportunities for improvements or areas that may have been overlooked during the data collection process.
3. Review results of the five major cost categories and ensure all appropriate data was collected and entered into the correct cost categories.
4. Identify cost categories that require logical explanations for significant differences between the “typical” and “actual” costs
5. Develop the necessary logical explanations (SMS report template format)
6. Use identified opportunities, survey results, and complexity to identify strategies for improvement. Use the TCO Manager software’s “target” modeling capabilities to determine the impact of implementing key strategies for improvement.
7. Develop draft TCO evaluation report using the standard SMS report template format.
8. Submit draft report for SMS quality assurance review
9. Finalize draft report and deliver to agency head. Provide an overview of the results.

REVIEW AND FINALIZE THE DRAFT TCO EVALUATION REPORT

1. Meet with agency staff to discuss strategies for improvement and answer questions
2. Review concerns and/or recommendations for changes to the draft report.
3. Adjust the draft report as needed, and either finalize the report or deliver a revised draft report for review.
4. Finalize the report and deliver a color copy of the final report to the agency head.
5. Provide the Seat Management Section with electronic copies (PDF or MS Word format) of the final report. Also provide any TCO metrics that may be required by COTS or the Secretary of Technology and an electronic copy of the TCO Manager software’s “.gtm” file used to develop the report.

SEAT MANAGEMENT SECTION SUPPORT FOR TCO EVALUATIONS USING THIS MODEL

1. Staff is available to provide guidance, assistance, and advice to agency staff using this model and the Gartner TCO Manager for Distributed Computing Environments version 4.5.3 software.
2. Data collection worksheets are available on the Seat Management Section's web site at <http://www.seatmanagement.state.va.us>
3. The SMS TCO Report Template (MS Word format) is available for downloading from the Seat Management Section's web site.

(Institutions of Higher Education name)

DRAFT TCO PROJECT SCOPE STATEMENT

(Recommended and minimum scope)

September 6, 2001

SCOPE

The *(internal division/department name)* staff will perform a TCO for the distributed computing environment of the *(college or university name)*. All computing assets, user staff, IT resources, and costs collected for this study shall be limited to those directly related to using, supporting and maintaining the distributed computing environment for all Administrative functions.

The following are scope criteria for this evaluation:

- The evaluation period will cover the most recent twelve months
- Physical counts (assets, end users, etc.) will be as of the last day of the reporting period
- Servers are considered out of scope if a dumb terminal can run the application unchanged
- As appropriate, servers and administration and operations staff will be prorated across functional areas

The following are out of scope for this evaluation:

- Mainframes
- Personal digital assistant (PDA) computers
- Student owned client computers (desktops and portables)
- All distributed computing assets not directly owned or leased by the university name. This includes those assets acquired as part of research grant funds, privately owned bookstore equipment, etc.
- Student Labs
- Networking Infrastructure in Student Dorms

(agency name)

DRAFT TCO PROJECT SCOPE STATEMENT

(Recommendation – large agencies should break their TCO evaluations into multiple parts so that any one part can be successfully completed within an 7-10 week timeframe)

October 2, 2001

SCOPE

The *(internal division/department name)* staff will perform a TCO for the distributed computing environment of the *(agency name)*. All computing assets, user staff, IT resources, and costs collected for this study shall be limited to those directly related to using, supporting and maintaining the distributed computing environment for *(all or specific business)* business functions. *Specify all business locations included in the evaluation.*

The following are scope criteria for this evaluation:

- The evaluation period will cover the most recent twelve months
- Physical counts (assets, end users, etc.) will be as of the last day of the reporting period
- Servers are considered out of scope if a dumb terminal can run the application unchanged
- As appropriate, servers and administration and operations staff will be prorated across functional and business areas

The following are out of scope for this evaluation:

- Mainframes
- Personal digital assistant (PDA) computers

TCO Evaluation Schedule For (agency name)

Seat Management Sections Contacts –

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<i>Data Collection Items (see TCO Distributed Computing Assessment TCO Survey)</i>	<i>Collection Process</i>	<i>Agency Contact Name /Phone/Email</i>	<i>Start Date</i>	<i>End Date</i>
Company Profile (1-18)	Consensus meeting, results posted in 9L Tcosurv.doc (questions 1-18)			
Current Environment Assets (19 –27)	SMS Worksheet 4, results posted to 9L Tcosurv.doc (Asset questions 19, 20, 22, 23, 24, 26, and 27)			
Current Expenses (28 – 32)	SMS Worksheet 4 and 4A. Results posted to 9L Tcosurv.doc (Expense questions 28 - 32)			
Operations Expenses (33 – 38)	Consensus meeting, using the Personal Work Allocation worksheet			
Operations and Service Desk Metrics (39)	Collect the requested information and enter the results in Tcosurv.doc question 39.			
Administration Expenses (40 – 42)	Consensus meeting, using Personal Work Allocation worksheet			
Complexity (43 – 74)	Consensus meeting, results posted to 9L Tcosurv.doc (questions 43-74)			
Best Practices (75)	Consensus meeting IT staff and Worksheet 5, results posted to 9L Tcosurv.doc (question 75)			
End-User Operations and Downtime (76 –77) # users and avg end user salary	SMS Worksheet 3, results posted to 9L Tcosurv.doc (questions 14 and 76)			

(continued)

<i>Data Collection Items (see TCO Distributed Computing Assessment TCO Survey)</i>	<i>Collection Process</i>	<i>Agency Contact Name /Phone/Email</i>	<i>Start Date</i>	<i>End Date</i>
End-User Operations and Downtime (78 (1-42)) HTML end user survey	Internet on-line survey (from eGOV or agency established HTML survey) with results imported into the TCO Manager software..			
DRAFT TCO REPORT	Hardcopy color Draft Report (SMS report template)			
Final TCO Report	Hardcopy color Report Plus PDF files of Report			

- Provide a list of agency personnel with phone numbers and e-mail addresses.

Page 1

PERS-SPL.XLS

End User Average Salary Calculations

Organization contract person and phone -**Instructions Classified/Salaried Employees**

1 - List all classified/salaried employees in Column A. Include the agency head with the classified/salaried employees.

2 - Compute each classified/salaried employee's annual salary. This should be the actual gross salary paid the employee for the evaluation period or the employee's annual salary amount as of the last day of the evaluation period. (Note use one method or the other, do not combine actual gross salary paid with annual salary amounts)

3 - If actual gross salary paid was used in "2" above, set all "# FTEs" (column E) equal 1.00. If the annual salary amount as of the last day of the evaluation period was used in "2" above, complete the Column E (# FTEs) for each listed employee. Use "1.00" for all employees that were present for the whole evaluation period, and use some percentage of an FTE for those employees that only worked part of the evaluation period (new hires, retired, resignations, etc.).

4 - Sum the amounts paid in Column F.

CLASSIFIED/SALARIED EMPLOYEES			Annual Salary	# FTEs (.10 - 1.00)	Amount Paid
Employee A			\$40,000	1.00	\$40,000
Employee B		EXAMPLE	\$36,000	1.00	\$36,000
Employee C (retired June 30)			\$50,000	0.50	\$25,000
				Total	\$101,000
CLASSIFIED/SALARIES EMPLOYEES			Annual Salary	# FTEs (.10 - 1.00)	Amount Paid
1					\$0
2					\$0
3					\$0
4					\$0
5					\$0
6					\$0
7					\$0
8					\$0
9					\$0
10					\$0
				Total	\$0

End User Average Salary Calculations*Instructions Hourly (P14) Employees or Contractors*

1 - List all hourly employees followed by contractors that are counted as end users in Column A.

2 - Compute Column D (Amount Paid) using one of the following:

- List the hourly rate each listed employee/contractor was paid in Column B and the corresponding number of hours worked during the evaluation period in Column C. Complete Column F by multiplying the hourly rate in Column B times the number of hours worked in Column C.

or

- List the actual gross amount paid to the employee during the evaluation period in Column F

3 - Sum the amounts in Column F.

HOURLY EMPLOYEES	Rate/Hour	Hours Worked			Amount Paid
<i>Employee D</i>	<i>10.00</i>	<i>1000.00</i>			<i>\$10,000</i>
<i>Employee E</i>	<i>9.30</i>	<i>500.50</i>			<i>\$4,655</i>
				<i>Total</i>	<i>\$14,655</i>

HOURLY EMPLOYEES	Rate/Hour	Hours Worked			Amount Paid
1					\$0.00
2					\$0.00
3					\$0.00
4					\$0.00
5					\$0.00
6					\$0.00
7					\$0.00
8					\$0.00
9					\$0.00
10					\$0.00
11					\$0.00
				<i>Total</i>	<i>\$0</i>

Hourly unburdened

\$0

End User Average Salary Calculations

CONTRACTORS (END USERS)	Rate/Hour	Hours Worked			Amount Paid
<i>Contractor 1</i>	<i>25.20</i>	<i>1725.00</i>			<i>\$43,470</i>
<i>Contractor 2</i>	<i>39.50</i>	<i>900.00</i>			<i>\$35,550</i>
				<i>Total</i>	<i>\$79,020</i>

CONTRACTORS (END USERS)	Rate/Hour	Hours Worked			Amount Paid
					\$0.00
					\$0.00
					\$0.00
					\$0.00
					\$0.00
					\$0.00
					\$0.00
				<i>Total</i>	<i>\$0</i>

Seat Management Section Calculation Notes

Note 1 - P14 hourly employees = (amount paid) x 1.0765 (state SSN) / 1.28

Contractor unburdened

\$0.00

Note 2 - contractors = (total amount paid) / 1.28

Note 3 - Notes 1 and 2 remove the burden rate for P14s and contractors that is added back by the software

Note 4 - Total End Users - count of the individuals shown in column A for salaried employees, and the number of full time equivalents for hourly employees and contract

Total End Users = 0 Unburdened end user avg salary #DIV/0!

Evaluation Period (start - end)

[illegible]

CLIENTS (Desktops and portables)									
<p>Desktop - Specify desktop clients by operating system. Include all assets for the in-scope users. Be sure to include all desktops that have been purchased by the enterprise for telecommuters. Segment the client assets between production and IS hardware. Exclude mobile clients as they are specified elsewhere. Mobile clients includes those mobile computers that are normally in a docking station. Exclude clients that are used as process control devices, as well as clients that are in staging but have not yet been deployed.</p>									
<p>Portable - Specify mobile (portable) clients by operating system. Include all assets for the in-scope users. Be sure to include all mobile computers that have been purchased by the enterprise for telecommuters, and road warriors, as well as in-house users using docking stations. Segment the client assets between production and IS hardware. Exclude mobile clients that are used as a process control devices, as well as mobile clients that are in staging but have not yet been deployed.</p>									
<p>Production - Production clients are used by end users to perform daily work.</p>									
<p>IS - IS clients are used exclusively by IS personnel in performing operations or administration activities. Examples include training, test, service desk, and management consoles. If the IS computer is used primarily for enterprise e-mail and to run personal productivity applications, then the asset should be included in the production asset counts rather than IS. IS devices should be limited to devices dedicated to IS functions and cannot be directly associated with an individual (i.e., training rooms, test equipment, network monitors, etc.).</p>									

[illegible]

Total client costs equals the sum of the Annual TCO Expensed Amt for all portable and desktop units calculated above

[illegible]

Evaluation Period (start - end)

[illegible]

[illegible]

Software Function

Other - Annualized expenditures for new and upgraded server executing software not included in the categories above e.g. NOS. Do not include the cost of IS software in this section.

Utility - Would include infrastructure servers - Example - Domain server.

Total server software costs equals the sum of the Annual TCO Expensed Amt for all server software calculated above

[illegible]

TYPE SOFTWARE

Other - Annualized expenses for all software that does not fit into the categories above e.g. operating systems and utilities. Do not include the costs of IS software.

[illegible]

Calculate Annual TCO Expensed Amt for like desktops as follows:									
---	--	--	--	--	--	--	--	--	--

Purchased - (QTY x Cost per unit) divided by 3 (years)									
--	--	--	--	--	--	--	--	--	--

Leased - (QTY x Cost per unit) times 12 (months)								
---	--	--	--	--	--	--	--	--

TCO Expensed Amt for like portables as follows:										
---	--	--	--	--	--	--	--	--	--	--

Purchased - (QTY x Cost per unit) divided by 2 (years)									
---	--	--	--	--	--	--	--	--	--

Leased - (QTY x Cost per unit) times 12 (months)								
---	--	--	--	--	--	--	--	--

[illegible][illegible]

EXPENSE DEFINITIONS AND WORKSHEET

Upgrades, Spares/Spare Parts and Supplies

SERVERS

Upgrades - Hardware upgrades for servers are the annualized expenses for various hardware improvements made to servers, including hard drives, processor, memory, network connectivity, removable media, uninterruptible power supplies. Such upgrades were not included in the original purchased bundle.

Description	Amount	Allocate amount to File/Print, Application/Database, Email/Groupware, and Utility/Comm/Other

Spares/Spare Parts - The annualized expenses for spare server components including disk drives, processors, motherboards, network connectivity, removable media devices, and other components.

Do not include the cost of a hot spare server, include the hot spares in server expense, depreciation or lease.

The spare parts charge in maintenance contracts should be allocated to this category.

Description	Amount	Allocate amount to File/Print, Application/Database, Email/Groupware, and Utility/Comm/Other

Supplies - The annualized expense for server related consumables such as diskettes, programmable CD-ROMs, backup tapes, removable media and any other computer supplies for servers.

This fee does not include toner or paper for printers that are server attached.

Description	Amount	Allocate amount to File/Print, Application/Database, Email/Groupware, and Utility/Comm/Other

CLIENTS (DESKTOPS AND PORTABLES)

Upgrades - Hardware upgrades for clients are the annualized expenses for various hardware improvements made to clients, including hard drives, processor, memory, network connectivity, removable media, and uninterruptible power supplies. Such upgrades were not included in the original purchased bundle.

Description	Amount	Allocate Amount between Desktops and Portables

Spares/Spare Parts - The annualized expenses for spare client components including disk drives, processors, motherboards, network connectivity, removable media devices, and other components.

Do not include the cost of a hot spare client, include the hot spares in client expense, depreciation or lease.

The spare parts charge in maintenance contracts should be allocated to this category.

Description	Amount	Allocate Amount between Desktops and Portables

Supplies - The annualized expense for client-related consumables such as diskettes, programmable CD-ROMs, backup tapes, removable media and any other computer supplies for clients.

This fee does not include toner or paper for printers that are client-attached.

Description	Amount	Allocate Amount between Desktops and Portables

PERIPHERALS

Upgrades - Hardware upgrades for peripherals are the annualized expenses for various hardware improvements made to peripherals, including peripheral memory, network connectivity, removable media, uninterruptible power supplies. Such upgrades were not included in the original purchased bundle.

Description	Amount	Allocate Amount to Personal Printers/Plotters, Dept/Enterprise Printers, and Other Peripherals

Spares/Spare Parts - The annualized expenses for spare peripheral components.

Do not include the cost of a hot spare peripheral, include the hot spares in peripheral expense, depreciation or lease.

The spare parts charge in maintenance contracts should be allocated to this category.

Description	Amount	Allocate Amount to Personal Printers/Plotters, Dept/Enterprise Printers, and Other Peripherals

Supplies - The annualized expense for peripheral related consumables such as toner, writable CD-ROMs, and any other supplies for peripherals.

This fee does not include paper for printers.

Description	Amount	Allocate Amount to Personal Printers/Plotters, Dept/Enterprise Printers, and Other Peripherals

NETWORK DEVICES

Upgrades - Hardware upgrades for network devices are the annualized expenses for various hardware improvements made to network devices. Such upgrades were not included in the original purchased bundle.

Description	Amount

Spares/Spare Parts - The annualized expenses for spare network device components.

Do not include the cost of a hot spare network device. Include the hot spares in network device expense, depreciation or lease.

The spare parts charge in maintenance contracts should be allocated to this category.

Description	Amount

Supplies - The annualized expense for network device related consumables.

Description	Amount

IS HARDWARE AND SOFTWARE

IS Hardware is hardware that primarily supports an IS process and not a business or user process. Examples are test and training devices, and help desk consoles. Devices used by IS personnel for personal productivity functions would not be considered IS hardware.

For the IS hardware (servers, clients, peripherals, and network devices) specified in the Current Environment - Assets questionnaire, specify the annualized capital expenses.

Specify the costs according to the function served by the IS hardware.

Upgrades - Hardware upgrades for clients are the annualized expenses for various hardware improvements made to clients, including hard drives, processor, memory, network connectivity, removable media, uninterruptible power supplies. Such upgrades were not included in the original purchased bundle.

Description	Amount

Spares/Spare Parts - The annualized expenses for spare client components including disk drives, processors, motherboards, network connectivity, removable media devices, and other components.

Do not include the cost of a hot spare client, include the hot spares in client expense, depreciation or lease.

The spare parts charge in maintenance contracts should be allocated to this category.

Description	Amount

Supplies - The annualized expense for client related consumables such as diskettes, programmable CD-ROMs, backup tapes, removable media and any other computer supplies for clients.

This fee does not include toner or paper for printers that are client attached.

Description	Amount

(AGENCY NAME)

TCO BEST PRACTICES WORKSHEET 5

Best Practices	Scope % (0-100)	Level (Basic, Medium, Advanced)
Technology Improvements - Asset Management		
Automated Asset Management		
Software Inventory		
Hardware Inventory		
Automated Software Distribution		
Technology Improvements - Systems Management		
Virus Detection and Repair		
Systems Management		
Server Based Client Image Control		
User State Management and Restore		
Technology Improvements - Managed PC		
Unattended Power Up		
Client Hardware Event Management		
Low Impact Upgradeability		
Technology Improvements - Scalability		
Scalable Architecture		
Low Risk, High Quality Vendor/Provider Selection		
Technology Improvements - Business Protection		
Fault Tolerance		
Automated Backup and Restore		
Hardware Physical Security Management		
Technology Improvements - Service Desk		
Service Desk Problem Management and Resolution		
Client Remote Control		
Process Improvements - User Management		
Enterprise Policy Management		
Locked User Environment		
Data Security Management		
Change Management		
Process Improvements - Standardization		
Vendor Standardization		
Platform Standardization		
Application Standardization		
Centralized and Optimized Procurement		
Process Improvements - Practice Management		
More Time Spent Planning Versus Implementing		
Service Level Tracking and Management		
Capacity Planning		
TCO Lifecycle Management		
People Improvements		
User Training		
IS Training		
IS Staff Highly Motivated		
Stable IS Organization		

Terms and definitions for TCO Best Practices and contained in Attachment B of the DRAFT
TCO Guidelines <http://www.seatmanagement.state.va.us/documents/TCOGuidance.html>